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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/883,520

Applicant(s)

PARSONS ET AL.

Examiner

Peter Y. Choi

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6, 8-13, 16 and 18-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6, 8-13, 16 and 18-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

FINAL ACTION

Response to Amendment

1. The amendment filed on 7/24/2006 has been entered. It is noted that claim 8 is missing “23” after “claim” in line 1. The applicant is required to correct this error in the next listing of claims.

Claim Rejections - 35 USC § 102/103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8, 10, 13, 18-24, 26, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by, or alternatively under 35 U.S.C. 103(a) as obvious over, USPN 5,521,266 to Lau.

Regarding claims 18-22, Lau teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by

weight of at least one non-hydrophilic monomer and a polymeric colloid component, wherein said polymer component is emulsion polymerized using said colloid component as a stabilizer, (see entire document including column 2 lines 27-52, column 4 lines 9-37, column 5 line 7 to column 6 line 11, column 8 lines 12-24, Table 5.1).

Regarding claims 18-22, Lau does not appear to teach that the latex polymer composition forms films that are dispersible rather than soluble in tap water in that a film formed from the polymer breaks into small discrete particles that can be filtered out, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt. However, the claimed properties are deemed to be inherent to the structure in the prior art since the Lau reference teaches an invention with a similar structural and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Applicants to prove otherwise. Additionally, it would have been obvious to one of ordinary skill in the emulsion binder art at the time the invention was made to form the emulsion binder of Lau wherein the polymer component comprises 100 weight percent of a hydrophilic monomer and the hydrophilic monomer is methacrylic acid, as Lau teaches that the hydrophilic monomer may comprise about 100 weight percent and the use of the optimum or workable ranges discovered by routine experimentation is within the ordinary skill in the art. In this optimization, the properties would additionally appear to be inherent.

Regarding claim 18, the hydrophilic monomer is selected from the group consisting of an acidic monomer containing a carboxylic acid moiety, dicarboxylic acid moiety, a sulfonic acid moiety, or combinations thereof (column 5 lines 7-25).

Regarding claim 19, the hydrophilic monomer is selected from the group consisting of acrylic acid, methacrylic acid, and combinations thereof (column 5 lines 7-25).

Regarding claim 20, the non-hydrophilic monomer is selected from the group consisting of (meth)acrylates, maleates, (meth)acrylamides, vinyl esters, and combinations thereof (column 4 lines 9-37).

Regarding claim 21, the non-hydrophilic monomer includes (meth)acrylates (column 4 lines 9-37).

Regarding claims 8, 10, 13, 23, and 24, Lau teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes at least one hydrophilic monomer selected from the group consisting of acidic monomers containing a carboxylic acid moiety, dicarboxylic acid moiety, a sulfonic acid moiety, or combinations thereof, and at least one non-hydrophilic monomer selected from the group consisting of (meth)acrylates, maleates, (meth)acrylamides, vinyl esters, and combinations thereof, and a polymeric colloid component, wherein said polymer component is emulsion polymerized using said colloid component as a stabilizer, (see entire document including column 2 lines 27-52, column 4 lines 9-37, column 5 line 7 to column 6 line 11, column 8 lines 12-24, Table 5.1).

Regarding claims 8, 10, 13, 23, and 24, Lau does not appear to teach that the latex polymer composition forms films that are dispersible rather than soluble in tap water in that a film formed from the polymer breaks into small discrete particles that can be filtered out, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt.

However, the claimed properties are deemed to be inherent to the structure in the prior art since the Lau reference teaches an invention with a similar structural and chemical composition as the claimed invention. Additionally, it would have been obvious to one of ordinary skill in the emulsion binder art at the time the invention was made to form the emulsion binder of Lau wherein the polymer component comprises 100 weight percent of a hydrophilic monomer and the hydrophilic monomer is methacrylic acid, as Lau teaches that the hydrophilic monomer may comprise about 100 weight percent and the use of the optimum or workable ranges discovered by routine experimentation is within the ordinary skill in the art. In this optimization, the properties would additionally appear to be inherent.

Regarding claim 8, the binder further comprises at least one component selected from the group consisting of plasticizers, tackifiers, fillers, humectants, surfactants, salts, fragrances, pigments, titanium dioxide, and encapsulated components (column 3 lines 43-67, column 5 line 63 to column 6 line 11).

Regarding claim 10, a non-woven article comprises the claimed non-woven material (column 8 lines 12-24).

Regarding claim 13, the Lau reference does not appear to disclose a wet tensile strength in 3 percent aqueous inorganic salt solution of at least 100 g/in, and a wet tensile strength in tap water of at least 40 g/in. However, the claimed properties are deemed to be inherent to the structure in the prior art since the Lau reference teaches an invention with a similar structural and chemical composition as the claimed invention.

Regarding claim 24, the colloid is present in the latex polymer in amounts of from 1 to 75 weight percent based on polymer solids (column 5 line 63 to column 6 line 11).

Regarding claim 26, Lau teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by weight of at least one non-hydrophilic monomer (see entire document including column 2 lines 27-52, column 4 lines 9-37, column 5 line 7 to column 6 line 11, column 8 lines 12-24, Table 5.1).

Regarding claim 26, Lau does not appear to teach that the latex polymer composition forms films that are dispersible rather than soluble in tap water in that a film formed from the polymer breaks into small discrete particles that can be filtered out, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt. However, the claimed property is deemed to be inherent to the structure in the prior art since the Lau reference teaches an invention with a similar structural and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Applicants to prove otherwise. Additionally, it would have been obvious to one of ordinary skill in the emulsion binder art at the time the invention was made to form the emulsion binder of Lau wherein the polymer component comprises 100 weight percent of a hydrophilic monomer and the hydrophilic monomer is methacrylic acid, as Lau teaches that the hydrophilic monomer may comprise about 100 weight percent and the use of the optimum or workable ranges discovered by routine experimentation is within the ordinary skill in the art. In this optimization, the properties would additionally appear to be inherent.

Regarding claim 27, Lau teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by weight of at least one non-hydrophilic monomer (see entire document including column 2 lines 27-52, column 4 lines 9-37, column 5 line 7 to column 6 line 11, column 8 lines 12-24, Table 5.1).

Regarding claim 27, Lau does not appear to teach that the latex polymer composition forms films that are dispersible rather than soluble in tap water in that a film formed from the polymer breaks into small discrete particles that can be filtered out, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt, and that the films are further characterized in that divalent ions do not inhibit redispersibility in water. However, the claimed property is deemed to be inherent to the structure in the prior art since the Lau reference teaches an invention with a similar structural and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Applicants to prove otherwise. Additionally, it would have been obvious to one of ordinary skill in the emulsion binder art at the time the invention was made to form the emulsion binder of Lau wherein the polymer component comprises 100 weight percent of a hydrophilic monomer and the hydrophilic monomer is methacrylic acid, as Lau teaches that the hydrophilic monomer may comprise about 100 weight percent and the use of the optimum or workable ranges discovered by routine experimentation is within the ordinary skill in the art. In this optimization, the properties would additionally appear to be inherent.

Response to Arguments

5. Applicants' arguments filed July 24, 2007, have been fully considered but they are not persuasive. Applicants argue that the claimed features are not suggested by Lau and the polymers disclosed in Lau do not resemble the emulsion polymer binders of the claimed invention, since the polymers of Lau are not dispersible in water as claimed. Applicants have submitted a Declaration of July 24, 2007, in support of their arguments.

Regarding Applicants' argument that Lau does not suggest the claimed features, Examiner respectfully disagrees. As set forth above, Lau teaches each of the claimed limitations but is silent as to the properties which are claimed, specifically that the polymers are not dispersible in water. In the Declaration of July 24, 2007, page 4 section 5, Applicants refer to Table 4.2 wherein Lau appears to teach Examples wherein the weight percentage of methacrylic acid is between 0 and 2%. The Declaration argues that it is clear to Declarant that the emulsion polymers of Lau are not dispersible in water, and their dispersibility would not change in response to salt concentration. However, Applicants' claimed invention only requires 1 to 100 weight percent of a hydrophilic monomer (which may be methacrylic acid) and from 0 to 99 weight percent of at least one non-hydrophilic monomer (which may be methacrylates) which is emulsion polymerized. Therefore, the claimed properties should flow from any combination of the hydrophilic monomer and non-hydrophilic monomer within the claimed ranges as set forth above, which is emulsion polymerized using the colloid component, else the claimed invention would not appear to be operable. Lau clearly teaches the ranges, wherein the methacrylic acid component or hydrophilic monomer is about 100 weight percent, and the component is emulsion

polymerized using a colloid, as set forth above. Juxtaposed with Applicants' claimed invention, the properties should equally be inherent to the invention of Lau.

Additionally, it is well-settled that unsupported arguments are not a substitute for objective evidence. The Declaration is not persuasive as it only suggests an opinion as to whether, from the perspective of Declarant, the embodiments shown in Table 4.2 are dispersible in water. A prior art reference must be considered in its entirety, as a whole, including portions that would lead away from the claimed invention. There is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of invention, but only that the subject matter is in fact inherent in the prior art reference. Applicants' arguments and Declaration do not provide evidence that based on the teachings of Lau, the invention formed from Lau would not inherently have the claimed properties, nor has Applicants' arguments and Declaration established an unobvious difference between the invention of Lau and the claimed invention. As Lau appears to teach a substantially similar structure and composition as the claimed invention, the claims remain rejected.

6. Claims 8, 10, 13, 18-23, 26, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by, or alternatively under 35 U.S.C. 103(a) as obvious over, USPN 5,631,317 to Komatsu.

Regarding claims 18-22, Komatsu teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent

by weight of at least one non-hydrophilic monomer and a polymeric colloid component, wherein said polymer component is emulsion polymerized using said colloid component as a stabilizer, and wherein said latex polymer composition forms films that are dispersible rather than soluble in tap water, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt (see entire document including column 1 lines 7-48, column 2 lines 21-67, Example 10, column 4 lines 14-24, column 5 lines 1-61).

Regarding claims 18-22, Komatsu does not appear to teach that the film formed from the polymer breaks into small discrete particles that can be filtered out. However, the claimed property is deemed to be inherent to the structure in the prior art since the Komatsu reference teaches an invention with a substantially similar structure and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Applicants to prove otherwise. Additionally, the invention of Komatsu is dispersible in tap water and dissolved in a flush toilet (column 5 lines 45-61). Therefore, it appears that the invention of Komatsu breaks into small discrete particles capable of being filtered out.

Regarding claim 18, the hydrophilic monomer is selected from the group consisting of an acidic monomer containing a carboxylic acid moiety, dicarboxylic acid moiety, a sulfonic acid moiety, or combinations thereof (column 2 lines 20-67).

Regarding claim 19, the hydrophilic monomer is selected from the group consisting of acrylic acid, methacrylic acid, and combinations thereof (column 2 lines 20-67).

Regarding claim 20, the non-hydrophilic monomer is selected from the group consisting of (meth)acrylates, maleates, (meth)acrylamides, vinyl esters, and combinations thereof (column 2 lines 20-67, column 4 lines 7-24).

Regarding claim 21, the non-hydrophilic monomer includes (meth)acrylates (column 4 lines 7-24).

Regarding claim 8, 10, 13, and 23, Komatsu teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes at least one hydrophilic monomer selected from the group consisting of acidic monomers containing a carboxylic acid moiety, dicarboxylic acid moiety, a sulfonic acid moiety, or combinations thereof; and at least one non-hydrophilic monomer selected from the group consisting of (meth)acrylates, maleates, (meth)acrylamides, vinyl esters, and combinations thereof, and a polymeric colloid component, wherein said polymer component is emulsion polymerized using said colloid component as a stabilizer, and wherein said latex polymer composition forms films that are dispersible rather than soluble in tap water, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt (see entire document including column 1 lines 7-48, column 2 lines 21-67, Example 10, column 4 lines 14- 24, column 5 lines 1-61).

Regarding claims 8, 10, 13, and 23, Komatsu does not appear to teach that the film formed from the polymer breaks into small discrete particles that can be filtered out. However, the claimed property is deemed to be inherent to the structure in the prior art since the Komatsu reference teaches an invention with a substantially similar structure and chemical composition as

the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Applicants to prove otherwise. Additionally, the invention of Komatsu is dispersible in tap water and dissolved in a flush toilet (column 5 lines 45-61). Therefore, it appears that the invention of Komatsu breaks into small discrete particles capable of being filtered out.

Regarding claim 8, the binder further comprises at least one component selected from the group consisting of plasticizers, tackifiers, fillers, humectants, surfactants, salts, fragrances, pigments, titanium dioxide, and encapsulated components (column 4 lines 7 to column 5 line 40).

Regarding claim 10, a non-woven article comprises the claimed non-woven material (column 5 lines 58-61).

Regarding claim 13, the Komatsu reference does not appear to disclose a wet tensile strength in 3 percent aqueous inorganic salt solution of at least 100 g/in, and a wet tensile strength in tap water of at least 40 g/in. However, the claimed properties are deemed to be inherent to the structure in the prior art since the Komatsu reference teaches an invention with a similar structural and chemical composition as the claimed invention.

Regarding claim 26, Komatsu teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by weight of at least one non-hydrophilic monomer, wherein said latex polymer composition forms films that are dispersible rather than soluble in tap water, and non-dispersible in aqueous

solutions containing 0.5 weight percent or more of an inorganic salt (see entire document including column 1 lines 7-48, column 2 lines 21-67, Example 10, column 4 lines 14- 24, column 5 lines 1-61).

Regarding claim 26, Komatsu does not appear to teach that the film formed from the polymer breaks into small discrete particles that can be filtered out. However, the claimed property is deemed to be inherent to the structure in the prior art since the Komatsu reference teaches an invention with a substantially similar structure and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Applicants to prove otherwise. Additionally, the invention of Komatsu is dispersible in tap water and dissolved in a flush toilet (column 5 lines 45-61). Therefore, it appears that the invention of Komatsu breaks into small discrete particles capable of being filtered out.

Regarding claim 27, Komatsu teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by weight of at least one non-hydrophilic monomer, wherein said latex polymer composition forms films that are dispersible rather than soluble in tap water, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt, and wherein the films are further characterized in that divalent ions do not inhibit redispersibility in water (see entire document including column 1 lines 7-48, column 2 lines 21-67, Example 10, column 4 lines 14- 24, column 5 lines 1-61, column 6 lines 50-62).

Regarding claim 27, Komatsu does not appear to teach that the film formed from the polymer breaks into small discrete particles that can be filtered out. However, the claimed property is deemed to be inherent to the structure in the prior art since the Komatsu reference teaches an invention with a substantially similar structure and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Applicants to prove otherwise. Additionally, the invention of Komatsu is dispersible in tap water and dissolved in a flush toilet (column 5 lines 45-61). Therefore, it appears that the invention of Komatsu breaks into small discrete particles capable of being filtered out.

Regarding claims 22, 23, 26 and 27, the limitation that the polymer component is emulsion polymerized using the colloid component as a stabilizer is a product by process limitation. Absent a showing to the contrary, it is Examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. The burden has been shifted to Applicant to show unobvious difference between the claimed product and the prior art product. The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if Applicant intends to rely on Examples in the specification or in a submitted declaration to show unobviousness, Applicant should clearly state how the Examples of the present invention are commensurate in scope with

the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

Regarding claims 22, 23, 26, and 27, it should be noted that the Declaration of October 26, 2006, page 5, section 10, states, "It would be within the general knowledge of those skilled in the polymer arts to make a resin with the claimed glass transition temperature of -40°C to $+105^{\circ}\text{C}$. That the Tg of the polymer can be easily controlled by the monomer composition, based on the Tg of the individual monomers." Additionally, in the event it is shown that Komatsu does not appear to teach the polymeric colloid component, it should be noted that the Declaration of March 6, 2007, page 2, section 5, states, "Generally, in emulsion polymerization processes, a stabilizing agent is proved to an aqueous medium where the stabilizing agent may include surfactants, emulsifiers, protective colloids or the like."

In the event it is shown that the Komatsu reference does not disclose the claimed invention with sufficient specificity, the invention is obvious because the Komatsu reference discloses the claimed constituents and discloses that they may be used in combination.

Response to Arguments

7. Applicants' arguments filed July 24, 2007, have been fully considered but they are not persuasive. Applicants argue that the emulsion polymers of Komatsu are unlike the claimed emulsion binders, which Applicants support with the Declaration of July 24, 2007. Specifically, Applicants argue that the Komatsu polymer is not emulsion polymerized, nor is it stabilized by polymer colloids or any other stabilizing agents, and that the emulsion polymerization process used to make the latex binder of claimed invention imparts critical structure and attributes to the

polymer. Additionally, Applicants argue that the Komatsu binders are inoperable in the presence of polyvalent cations.

Regarding Applicants' argument that the polymer of Komatsu is unlike the claimed binder, Examiner respectfully disagrees. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.

Applicants' Declaration has been considered but is not persuasive. The final product of both the claimed invention and Komatsu, as set forth above, is a emulsion binder comprising a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by weight of at least one non-hydrophilic monomer and a polymeric colloid component which is non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt. Therefore, as Applicants have not set forth unobvious differences between the invention of Komatsu and the claimed invention, the emulsion binder of Komatsu appears to anticipate the claimed invention.

Additionally, it is well-settled that unsupported arguments are not a substitute for objective evidence. The Declaration is not persuasive as it only suggests an opinion as to whether, from the perspective of Declarant, the binder resins of Komatsu are water soluble. When the reference relied on expressly anticipates or makes obvious all of the elements of the claimed invention, the reference is presumed to be operable. Once such a reference is found, the burden is on applicant to provide facts rebutting the presumption of operability. It is to be

presumed also that skilled workers would as a matter of course, if they do not immediately obtain desired results, make certain experiments and adaptations, within the skill of the competent worker.

Applicants' appear to argue that the difference between the invention of Komatsu and the claimed invention is that the claimed invention is "dispersible", in that the film can be broken into small pieces and filtered out. It should be noted that the "small pieces" recited by Applicants is subjective in nature as the specification does not define what constitutes "small", and that the "filtering out" recited by Applicants is recited as a limitation wherein the claimed invention is "capable of being filtered out". The invention of Komatsu is dispersible in tap water and dissolved in a flush toilet (column 5 lines 45-61), and, similar to the claimed invention, is non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt. Therefore, it appears that the invention of Komatsu breaks into small discrete particles capable of being filtered out.

Applicants additionally argue that the binders of Komatsu are inoperable in the presence of polyvalent salts. Examiner respectfully disagrees. Applicants recite column 4 lines 51-59 of Komatsu to support their assertion. However, the portion of Komatsu recited by Applicants is directed to an intermediate during the process of forming the product of Komatsu. As Applicants recite, the addition of a polyvalent cation "*after* the neutralization of the acrylic acid moiety" would make the "*formation* of the self-dispersing emulsion impossible". The self-dispersing emulsion product has not been produced since addition of a polyvalent cation during the process of forming the product would result in the incapability of the product being formed. Clearly, the portion cited does not refer to the final product.

Additionally, as is shown in column 6 lines 60-62 and in the Examples, the solubility of the product of Komatsu is tested in tap water containing calcium chloride (a polyvalent salt) and sodium chloride. The Examples set forth that the product of Komatsu is dispersible in tap water but is insoluble in 0.2% aqueous common salt solution.

Although Applicants note that evidence of unexpected results suffices for purposes of nonobviousness, Applicants have only argued that the claimed invention results in unexpected results. Applicants have not set forth *evidence* of unexpected results or unobvious differences between the invention of Komatsu and the claimed invention. The improvements do not appear to be substantial or unexpected as Komatsu appears to teach an emulsion polymer with substantially similar structure, composition, and properties as the claimed invention.

Claim Rejections - 35 USC § 103

8. Claims 8, 10, 13, 18-23, 26, and 27 are rejected under 35 U.S.C. 103(a) as being obvious over Komatsu in view of Lau.

Regarding claims 8, 10, 13, 18-23, 26, and 27, in the event it is shown that Komatsu does not teach a polymer composition formed by emulsion polymerization using a colloid component as a stabilizer, Lau teaches a similar composition suitable as a nonwoven binder comprising from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by weight of at least one non-hydrophilic monomer and a polymeric colloid component, wherein the composition may be prepared by solution or emulsion polymerization (Lau, column 2 lines 27-52, column 4 lines 9- 37, column 5 line 7 to column 6 line 11, column 8 lines 12-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the binder

of Komatsu with the polymerization methods taught by Lau, as the method of Lau is an equivalent method of forming an emulsion binder for use as a nonwoven binder.

9. Claims 2-6, 9, 11, 12, 16, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lau, as applied to claims 8, 10, 13, 18-24, 26, and 27 above, in view of USPN 5,976,694 to Tsai.

Regarding claims 2-6, 9, 11, 12, 16, and 25, Lau is silent with regards to specific properties of the non-woven material. Therefore, it would have been necessary and thus obvious to look to the prior art for conventional materials. Tsai provides this conventional teaching showing that it is known in the water-dispersible fabric art to use wood pulp fibers having a length of less than 0.5 cm in an air-laid non-woven material comprising 70 to 85 percent by weight of fibers, the non-woven material having a basis weight of from 20 to 200 gsm and further comprising a binder add-on of from 2 to 50 percent by weight (Tsai, see entire document including column 6 lines 38-58, column 5 lines 40-44, column 7 lines 10-18, column 7 lines 30-50, Examples 10-16). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the non-woven material from Lau with the specific properties, as taught by Tsai, motivated by the expectation of successfully practicing the invention of Lau.

Regarding claim 11, the nonwoven further comprises a lotion containing at least one ingredient selected from the group consisting of sodium chloride solution, preservatives, boric acid, bicarbonates, moisturizers, emollients, surfactants, humectants, alcohols, water, and fragrances (Tsai, column 8 lines 23-65).

Regarding claim 12, the non-woven article further comprises at least 0.5 percent by weight of inorganic salt, or a mixture of inorganic salt (Lau, column 5 lines 43-56).

10. Claims 2-6, 9, 11, 12, 16, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu, as applied to claims 8, 10, 13, 18-23, 26, and 27 above, in view of Tsai.

Regarding claims 2-6, 9, 11, 12, 16, and 25, Komatsu is silent with regards to specific properties of the non-woven material. Therefore, it would have been necessary and thus obvious to look to the prior art for conventional materials. Tsai provides this conventional teaching showing that it is known in the water-dispersible fabric art to use wood pulp fibers having a length of less than 0.5 cm in an air-laid non-woven material comprising 70 to 85 percent by weight of fibers, the non-woven material having a basis weight of from 20 to 200 gsm and further comprising a binder add-on of from 2 to 50 percent by weight (Tsai, see entire document including column 6 lines 38-58, column 5 lines 40-44, column 7 lines 10-18, column 7 lines 30-50, Examples 10-16). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the non-woven material from Komatsu with the specific properties, as taught by Tsai, motivated by the expectation of successfully practicing the invention of Komatsu.

Regarding claim 11, the nonwoven further comprises a lotion containing at least one ingredient selected from the group consisting of sodium chloride solution, preservatives, boric acid, bicarbonates, moisturizers, emollients, surfactants, humectants, alcohols, water, and fragrances (Tsai, column 8 lines 23-65).

Regarding claim 12, the non-woven article further comprises at least 0.5 percent by weight of inorganic salt, or a mixture of inorganic salt (Komatsu, column 4 lines 52-66).

11. Claims 2-6, 9, 11, 12, 16, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu in view of Lau, as applied to claims 8, 10, 13, 18-23, 26, and 27 above, and further in view of Tsai.

Regarding claims 2-6, 9, 11, 12, 16, and 25, Komatsu in view of Lau is silent with regards to specific properties of the non-woven material. Therefore, it would have been necessary and thus obvious to look to the prior art for conventional materials. Tsai provides this conventional teaching showing that it is known in the water-dispersible fabric art to use wood pulp fibers having a length of less than 0.5 cm in an air-laid non-woven material comprising 70 to 85 percent by weight of fibers, the non-woven material having a basis weight of from 20 to 200 gsm and further comprising a binder add-on of from 2 to 50 percent by weight (Tsai, see entire document including column 6 lines 38-58, column 5 lines 40-44, column 7 lines 10-18, column 7 lines 30-50, Examples 10-16). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the non-woven material from Komatsu in view of Lau with the specific properties, as taught by Tsai, motivated by the expectation of successfully practicing the invention of Komatsu.

Regarding claim 11, the nonwoven further comprises a lotion containing at least one ingredient selected from the group consisting of sodium chloride solution, preservatives, boric acid, bicarbonates, moisturizers, emollients, surfactants, humectants, alcohols, water, and fragrances (Tsai, column 8 lines 23-65).

Regarding claim 12, the non-woven article further comprises at least 0.5 percent by weight of inorganic salt, or a mixture of inorganic salt (Komatsu, column 4 lines 52-66).

Response to Arguments

12. Applicants' arguments filed July 24, 2007, have been fully considered but they are not persuasive. Applicants argue that Tsai does not supplement the Lau or Komatsu references in any meaningful way. Examiner respectfully disagrees. As set forth above, Tsai is relied on to teach the specific structure and composition regarding the nonwoven material and to teach that it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the non-woven material from Komatsu, Lau, or Komatsu in view of Lau with the specific properties, as taught by Tsai, motivated by the expectation of successfully practicing the invention of Komatsu, Lau, or Komatsu in view of Lau. Therefore, the claims remain rejected.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Y. Choi whose telephone number is (571) 272-6730. The examiner can normally be reached on Monday - Friday, 08:00 - 15:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew T Piziali/
Primary Examiner, Art Unit 1771

/Peter Y. Choi/
Examiner, Art Unit 1771
September 19, 2007